

**Pre-CERCLIS Screening Narrative**  
**Barite Hill/Nevada Goldfields**  
**McCormick County, South Carolina**

The Barite Hill/Nevada Goldfields site is located approximately 3 miles south of McCormick, South Carolina between US 378 and US 221 on the northern side of Road 30 in McCormick County, South Carolina. Clark Hill Reservoir on the Savannah River is approximately 3 miles west of the site. The mine site is relatively remote; there are no buildings, homes, or commercial buildings within 0.5 miles of the boundary. The site actively mined gold from 1991 to 1995. From 1995 until Nevada Goldfields filed for Chapter 7 Bankruptcy in 1999, the reclamation of the site was being addressed by Nevada Goldfields. On July 7, 1999 Nevada Goldfields handed the facility's keys to SCDHEC and abandoned the site.

The site is located along on a topographic high ridge area forming the headwaters of an unnamed tributary to Hawes Creek. The topography of the area consists of rolling hills with ridgelines at an elevation of 500 about feet. Within the site, the ridgeline comprising the site has a high point of about 510 feet and an average elevation of approximately 480 feet.

The permitted mine site totals 795.2 acres. Of this total, 659.7 acres are designated as buffer area (areas not disturbed beyond the pre-mine natural state); therefore the maximum disturbance area is 135.5 acres.

The facility used a cyanide solution in a heap leach process to extract gold from ore. There are 7 processing ponds onsite containing an unknown amount of free-liquids potentially contaminated with cyanide. Three large, multi-acre, waste rock piles contaminated with cyanide are left onsite. Each waste rock pile has the potential for producing acid. Storm water run on and runoff are not controlled at the site. Two open pits left from the mining operations remain. Each pit contains an unknown amount of water that is potentially acidic with a high dissolved metal content. Runoff from the site could contain a cyanide bearing solution or acidic water with a high dissolved metal content. This runoff could be impacting wetlands and the unnamed tributaries of Hawes Creek that surround the site.

## **Conclusions and Recommendations**

Due to the extent and nature of source areas, pathways, and targets, the site is proposed for listing on CERCLIS for further assessment.

**Pre-CERCLIS Checklist**  
Site Assessment Section  
SCDHEC Bureau of Land and Waste Management  
November 18, 2003

**Site Information**

Barite Hill/Nevada Gold Mine  
Site Name

SCD 987 597 903  
ID Number

SCN 000 407714

Between US 378 and US 221 off Road 30 in McCormick, SC

McCormick  
County

Address

PO Box 1510  
Address

29835  
Zip Code

McCormick  
City

N/A  
Contact Phone

N/A  
Contact Name

33 52 22.34      -82 17 49.67  
Latitude      Longitude  
33.87287222      82.2971305556

N/A  
Contact Address

135.5 Acres  
Approximate Size of Site

N/A  
Contact City, State, Zip

Barite Hill Gold Mine  
Alternate Site Names

☐ Industrial    ☐ Residential    ☐ Urban    ☒ Rural  
Setting – choose one

☐ Unfenced    ☒ Partially Fenced    ☐ Fenced    ☐ w/locked Gates    ☐ w/Guard  
Site Access – choose one

**Site Description/History**

The mine is located approximately 3 miles south of McCormick, South Carolina. Clark Hill Reservoir on the Savannah River is approximately 3 miles west of the site. The mine site is relatively remote; there are no buildings, homes, or commercial buildings within 0.5 miles of the boundary.

The Barite Hill/Nevada Goldfields site mined gold from 1991 to 1994 and silver from 1991 to 1992. Nevada Goldfields is controlled/owned by the Mexican based company, Grupo Autrey. Nevada Goldfields filed Chapter 7 Liquidation with the United States Bankruptcy Court, District of Delaware on June 25, 1999. They abandoned the site on July 7, 1999.

The facility used a cyanide solution in a heap leach process to extract gold from ore. There are 7 processing ponds onsite containing an unknown amount of free-liquids potentially contaminated with cyanide. Three large, multi-acre, waste rock piles contaminated with cyanide are left onsite. Each waste rock pile has the potential for producing acid. Storm water run on and runoff are not controlled at the site. Two open pits left from the mining operations remain. Each pit contains an unknown amount of water that is potentially acidic with a high dissolved metal content. Runoff from the site could contain a cyanide bearing solution or acidic water with a high dissolved metal content. This runoff could be impacting wetlands and the unnamed tributaries of Hawes Creek that surround the site.

**Pertinent Regulatory Activity**

DHEC Permits – Permit to Construct (No. 17,334-IW), 7-24-92; Permit to Operate, 9-28-1992; Permit to Operate, 3-1-1993; NPDES (No. SC0043401), 10-12-1989; Air Quality Permit (No. 1600-0006-CA, CB, CC, CD, and CE, 6-12-1990.

SCRLRCC Permit – Permit for Mining Operation (No. 0852), 8-14-1990

SCDHEC Notice of Violation (NOV), {each date is a separate notice} 8-25-95, 6-27-96, 10-30-1996, and 3-11-1997  
SCDHEC Consent Order 98-049-W, 6-11-1998

**Waste Source**

<input type="checkbox"/> Landfill
<input checked="" type="checkbox"/> Impoundment
<input type="checkbox"/> Drums
<input type="checkbox"/> Tanks/Containers
<input type="checkbox"/> Waste Pile
<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Other

**Size:**

18 million gallons

**Description:**

Open pit mine containing an unknown amount of water with a pH of 2 to 2.2

**Contaminants Known or Suspected:**

It is suspected the acidic water has a very high metal loading content.

**Waste Source**

<input checked="" type="checkbox"/> Landfill
<input type="checkbox"/> Impoundment
<input type="checkbox"/> Drums
<input type="checkbox"/> Tanks/Containers
<input type="checkbox"/> Waste Pile
<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Other

**Size:**

Three large multi-acre waste rock piles totaling about 64 acres

**Description:**

Waste rock piles containing overburden, waste rock with a high sulfur content, and cyanide laced rock from heap leach operations.

**Contaminants Known or Suspected:**

Cyanide, sulfur bearing rock with a high potential to create acid mine drainage, and metals.

**Waste Source**

<input type="checkbox"/> Landfill
<input checked="" type="checkbox"/> Impoundment
<input type="checkbox"/> Drums
<input type="checkbox"/> Tanks/Containers
<input type="checkbox"/> Waste Pile
<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Other

**Size:**

Seven processing ponds totalling about 10 acres

**Description:**

7 processing ponds onsite containing an unknown amount of free-liquids potentially contaminated with cyanide.

**Contaminants Known or Suspected:**

Cyanide, low pH water, metals.

**Groundwater Pathway**

Is there an observed or suspected release to groundwater? ☒ Yes ☐ No

Explain: It is likely that operations at the site have impacted groundwater. The open pit mine lies in an area of fractured bedrock. The pit is recharged by groundwater.

**Distance to Nearest Well:**

☒ < ¼ mile ☐ ¼ to ½ mile ☐ ½ to 1 mile ☐ > 1 mile

If no release is suspected/confirmed and the nearest well is > 1 mile, do not evaluate GW pathway.

**Potential Drinking Water Targets (Public & Private)**

☐ < ¼ mile ☐ ¼ to ½ mile ☐ ½ to 1 mile ☐ > 1 mile

Have nearby wells been sampled? ☒ Yes ☐ No

Sampling Details: The site has installed a series of monitoring wells to assess groundwater quality. The latest round of sampling in 1997 did not show an impact to groundwater. However, continued monitoring of the site stopped when Nevada Goldfields abandoned the site in 1998.

**Surface Water Pathway**

Is there an observed or suspected release to surface water? ☒ Yes ☐ No

Is there a well defined runoff pathway to perennial water? ☒ Yes ☐ No

Explain: The site operated a NPDES permitted outfall into the unnamed intermittent creek that flows into Hawes Creek.

**Distance to Perennial Surface Water:**

☐ < 100' ☐ 100 - 500' ☒ 500 - 1000' ☐ 1000 - 2500' ☐ > 2500'

If no release is suspected or observed and the distance to perennial water is > 2500 feet with no well defined runoff pathway, do not evaluate SW pathway.

Segment Name	Segment Distance	Estimated Flow	Targets Associated with Segment
Unnamed intermittent creek to south of site	5,855 feet	Minimal stream (less than 10 cfs)	Wetlands
Unnamed intermittent creek to north of site	4,300 feet	Minimal stream (less than 10 cfs)	Wetlands, potential fishery
Hawes Creek	3 miles	Small to moderate stream (10 to 100 CFS)	Fishery
Savannah River	Completes the 15-mile TDL	Large stream to river (> 1,000 to 10,000 cfs)	Fishery, wetlands, recreation area
		None	
		None	
		None	
		None	
		None	

**Soil Exposure / Air Pathway**

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Is there any contamination present or suspected on residential property, schools, playgrounds, etc.? ☐ Yes ☒ No

Explain: The site is located in a very remote rural area. There are no buildings, homes, or commercial buildings within 0.5 miles of the site's boundary.

**Estimated Residential Population:**

0	< ¼ mile	38	¼ to ½ mile	113	½ to 1 mile
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Are any wastes sources of a gaseous or particulate nature? ☐ Yes ☒ No

Sampling Details: None

**Site Map**

See attached

**USEPA/SCDHEC Self-Directed Work Team Decision**

Due to the extent and nature of source areas, pathways, and targets, the site is proposed for listing on CERCLIS.

**Attributes of cenq.shp within 0.25 Mile(s) Barite Hill Gold Mine**

Cntrbg	arsmall	percare	percpop	Buff_dist
659802005	508203.48200	0.00818	9.70148	0.25000

**Attributes of cenh.shp within0.5Mile(s) Barite Hill Gold Mine**

Cntrbg	arsmall	percareaa	percpop	Buff_dist
659802005	2032813.92800	0.03274	38.82964	0.50000

**Attributes of cen1.shp within1Mile(s) Barite Hill Gold Mine**

Cntrbg	arsmall	percare	percpop	Buff_dist
659802005	8131255.71100	0.13095	155.30670	1.00000



**Attributes of cen2.shp within2Mile(s) Barite Hill Gold Mine**

Cntrbg	arsmall	percare	percpop	Buff_dist
659802003	1900034.25000	0.01185	11.45895	2.00000
659802001	550758.71000	0.00768	8.40192	2.00000
659802005	28739528.34900	0.46282	548.90452	2.00000
659803001	1334701.53500	0.01586	13.71890	2.00000

# Attributes of cen3.shp within3Mile(s) Barite Hill Gold Mine

Cntrbg	arsmall	percare	percpop	Buff_dist
659802002	224916.60700	0.00309	6.29433	3.00000
659802003	8319956.22100	0.05189	50.17763	3.00000
659802001	7992286.72500	0.11139	121.86066	3.00000
659802004	1757222.71300	0.60890	322.71700	3.00000
659802005	42544087.73300	0.68513	812.56418	3.00000
659803001	12342831.40100	0.14666	126.86090	3.00000

# Attributes of cen4.shp within4Mile(s) Barite Hill Gold Mine

Cntrbg	arsmall	percare	percpop	Buff_dist
659801002	154266.10100	0.00080	0.50640	4.00000
659802002	6103960.41100	0.08379	170.68023	4.00000
659802003	17358402.14000	0.10826	104.68742	4.00000
659802001	18847293.37900	0.26268	287.37192	4.00000
659802004	2885920.62500	1.00000	530.00000	4.00000
659802005	55527064.88800	0.89421	1060.53306	4.00000
659803001	28860939.21100	0.34292	296.62580	4.00000

# Attributes of Species within4Mile(s) Barite Hill Gold Mine

id	distmiles	Common_nam
Barite Hill Gol	3.49957	SIGMORIA SHELFORDI
Barite Hill Gol	3.65527	OAK-HICKORY FOREST
Barite Hill Gol	3.12154	RED-COCKADED WOODPECKER
Barite Hill Gol	3.32908	RED-COCKADED WOODPECKER

# Attributes of Cercla within4Mile(s) Barite Hill Gold Mine

File	Epa_id_no	id	Status	distmiles	Zip_code	County	Gps
54244	SCD987577921	Barite Hill Gol	486	3.65176	29835	MCCORMICK	Y
20382	SCD987584117	Barite Hill Gol	494	1.96339	29835	MCCORMICK	Y

# Attributes of Ust within4Mile(s) Barite Hill Gold Mine

id	dismiles
Barite Hill Gol	2.99713
Barite Hill Gol	2.66435
Barite Hill Gol	2.66435
Barite Hill Gol	2.44015
Barite Hill Gol	2.67745
Barite Hill Gol	2.24712
Barite Hill Gol	2.82565
Barite Hill Gol	2.24712
Barite Hill Gol	2.64313
Barite Hill Gol	2.56215
Barite Hill Gol	2.81928
Barite Hill Gol	2.68341
Barite Hill Gol	2.64399
Barite Hill Gol	2.72760
Barite Hill Gol	2.82745

**Attributes of Ast\_all data.shp within4Mile(s) Barite Hill Gold Mine**

Id	distmiles
8	2.35217
14	2.37125
14	2.61730
13	3.35945

**Attributes of Kgwcust within4Mile(s) Barite Hill Gold Mine**

File	Desc	Ustid	id	distmiles
5061402	CROWN CENTRAL PETROL	06443	Barite Hill Gol	2.73871
8073103	CCB LTD SANDY ACRES	06433	Barite Hill Gol	2.82274



# Attributes of Isw within4Mile(s) Barite Hill Gold Mine

Epa_id_no	File_name	id	Permit_no	distmiles	Zip_code	County	Gps	Operating
	BARITE HILL/NEVADA GOLD MINE	Barite Hill Gol	IWP-242	0.21636	29835	MCCORMICK	N	N
	BARITE HILL/NEVADA GOLD MINE	Barite Hill Gol	332338-1601	0.21636	29835	MCCORMICK	N	N

**Attributes of Cdii within4Mile(s) Barite Hill Gold Mine**

Epa_id_no	File_name	id	Permit_no	distmiles	Zip_code	County	Gps	Operating
SCD987584117	MCCORMICK COUNTY LANDFILL	Barite Hill Gol	331002-1701	1.45490	29835	MCCORMICK	N	N

# Attributes of HZGEN within 4 Mile(s) Barite Hill Gold Mine

id	Epa_id	Fac_name	distmiles	Zip_code
Barite Hill Gol	SCR000003731	GEORGIA PACIFIC MCCORMICK CNS	1.38115	29835
Barite Hill Gol	SCD003355179	MILLIKEN & CO MCCORMICK PLANT	1.46339	29835
Barite Hill Gol	SC0000989095	SCARNG MCCORMICK	3.14496	29835
Barite Hill Gol	SCD987574068	FAST FARE SC-576	2.24712	29835
Barite Hill Gol	SCD987585148	R & D MAINTENANCE SERVICES INC.	2.24712	29835
Barite Hill Gol	SC0000107409	SCDOT MCCORMICK	2.24712	29835
Barite Hill Gol	SCD987582988	CSX TRANSPORTATION -MCCORMICK	2.24712	29835
Barite Hill Gol	SCD987597903	NEVADA GOLDFIELDS BARITE HILL	2.24712	29835
Barite Hill Gol	SCR000003731	GEORGIA PACIFIC MCCORMICK CNS	1.38217	29835
Barite Hill Gol	SCD003355179	MILLIKEN & COMPANY-MCCORMICK PLANT	1.46339	29835
Barite Hill Gol	SC0000989095	SCARNG MCCORMICK	3.14496	29835

U . S . E P A R E G I O N I V

# SDMS

## Unscannable Material Target Sheet

DocID: 10513546 Site ID: SCN1000407714

Site Name: Barite Hill

### Nature of Material:

Map:                     

Computer Disks:                     

Photos:                     

CD-ROM:                     

Blueprints:                     

Oversized Report:                     

Slides:                     

Log Book:                     

Other (describe): 4 mile radius map

Amount of material:                     

**\*Please contact the appropriate Records Center to view the material.\***